

31 January 1972

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Regards,



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Project Engineer
Advanced Development Projects

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SP-1811
Copy No. 4

SR-71
PROVIDING A TURN CAPABILITY
TO PERSONNEL PARACHUTE

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*Lockheed Aircraft Corporation***ADVANCED DEVELOPMENT PROJECTS**
BURBANK, CALIFORNIA

REPORT NO.	8	SP-1811
DATE	8	11 Nov. 1971
COPY NO.	8	

MODEL SR-71**TITLE** PROVIDING A TURN CAPABILITY TO
PERSONNEL PARACHUTE

PREPARED BY

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APPROVED BY

Clarence L. Johnson
Clarence L. Johnson

Senior Vice President

Advanced Development Projects

REVISIONS

DATE

PAGES AFFECTED

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FIGURE 1-4	TEST JUMPER DESCENT - 6 LINES RELEASED
FIGURE 1-5	PARACHUTE

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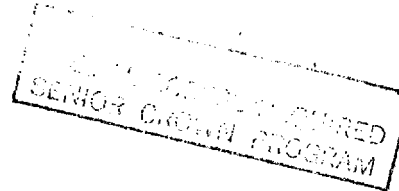
ABSTRACT

This report describes the modification to, and the tests of, the air crew parachutes, the objective of which was to provide a crew initiated and controlled turn (steering) capability during a descent.

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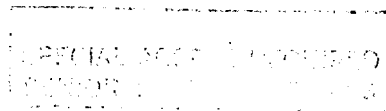
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INTRODUCTION

The personnel parachutes used on the SR-71 are not standard USAF personnel parachutes. The standard chutes are smaller and flatter and are capable of being turned during descent. The turning technique requires the release of four of the suspension lines from the canopy to the risers attached to the crewman's harness. Following this, the crewman, by chinning himself on one of the four risers, can cause the canopy to turn and thus can control his heading and, therefore, to some extent control his landing point to avoid obstructions.

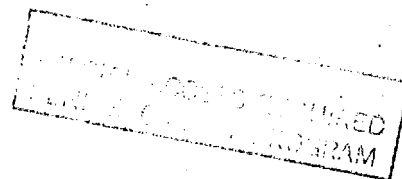
This report describes the attempt to provide a similar feature to the larger diameter and extended skirt canopy parachute used by the SR-71 air crew.



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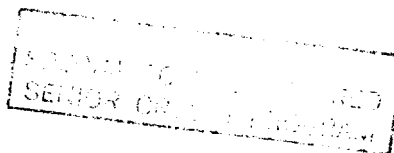
CONCLUSION



The intent of providing turn capability to the SR-71 parachute is to increase an air crewman's chances for survival.

However, fast reaction and high physical strength are required for successful use of the six line release method on the SR-71 parachute system. These requirements could not be met even with our extremely rigorous training programs. Also incorporating this technique will increase the complexity of parachute packing.

Therefore, it is concluded that this technique actually detracts from an air crewman's ability to survive and it is not recommended that it be incorporated in the SR-71 parachute system.



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DESCRIPTION OF MODIFICATION

An examination of Figure 1-5 will disclose the important anatomical features of the SR-71 air crew parachute when fully deployed. Following tests described in other sections of this report, it was determined that the optimum number of suspension lines to be released was six; three lines from each aft riser to the canopy.

Figure 1-1 gives an overall close-up of the risers and the modification to the aft risers to incorporate release lines to effect the release of the three suspension lines mentioned above.

Figure 1-2 is a more detailed close-up of the upper portion of one of the release lines and its attachment to the "D" ring to which the suspension lines from the canopy are attached.

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STATIC TESTS

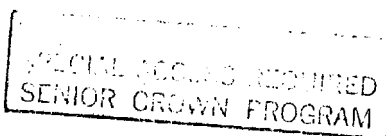
The purpose of the static tests was to determine the static strength of the suspension lines with and without the modification of adding the release line shown in Figure 1-2.

As shown in Figure 1-2 three of the eight suspension lines to the "D" ring were modified for these tests. Also full length suspension lines were used.

An examination of the following table of test results shows that the modification did not degrade the strength of the system.

<u>Sample No.</u>	<u>Type</u>	<u>Failure Load Lbs.</u>
1	Standard	3200
2	Modified	3250
3	Modified	3500
4	Modified	3000
5	Standard	3250
6	Standard	3250
7	Standard	3250
8	Standard	3250
9	Standard	3250
10	Modified	3500
11	Modified	3000

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WHIRL TOWER TESTS

The purpose of the whirl tower tests was (1) to test the pull force required on the release line to release the three suspension lines under simulated dynamic conditions and (2) to verify the structural integrity of the parachute lines and risers under simulated dynamic conditions.

- (1) Three tests using 300 lb. dummies were run at 170 KIAS to check pull forces required to release the three suspension lines. The results were as tabulated:

<u>Test No.</u>	<u>Pull Force Lbs.</u>	
1	L. H. 40	R. H. 50
2	L. H. 45	R. H. 35
3	L. H. 60	R. H. 60

- (2) A series of tests were run at various KIAS to verify structural integrity. The three tests at 170 KIAS reported above demonstrated the structural adequacy of the system at that KIAS.

Three tests were run at 300 KIAS with 300 lb. dummy and with a Navy test harness. In the first test, the "D" ring on the harness pulled out when the chute was approximately 3/4 open. In the second test, the neck ring on the dummy came away when the chute was approximately 3/4 open. In the third test there was no camera coverage and therefore no record of the sequence of failure. In all three of these tests the dummy separated from the chute. The release line modification was

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unaffected in all three tests.

An additional two tests were run at 225 KIAS and 250 KIAS
respectively with complete success.

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AIRPLANE DUMMY DROP TESTS

The purpose for making drop tests with dummies from airplanes was to discover the optimum number of suspension lines to be released to render the parachute capable of being turned (steered) by the air crewman.

These tests were performed with a 300 lb. dummy being dropped from a C-130 at 10,000 feet altitude and at 110 - 125 KIAS.

The SR-71 parachute has seven (7) suspension lines on each of the two rear risers (see Figure 1-2) and eight (8) suspension lines on each of the two front risers.

The first drop tests determined the maximum number of suspension lines that could be released on the rear risers before the canopy collapsed. The canopy deployed stably with a total of eight lines released (four on each side). However, when 10 lines were released (five on each side) the canopy would alternately fill and collapse at approximately 50 foot intervals. This established that the maximum number of lines released per rear riser should not exceed three (3) per side in order to provide the required safety for live jumps.

It was further determined that for proper stability in terms of canopy action, that no more than three lines per riser should be released. Therefore, the optimum number of lines to be released to effect turn control of the chute during descent should be three per rear riser for a total of six.

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LIVE JUMP TESTS

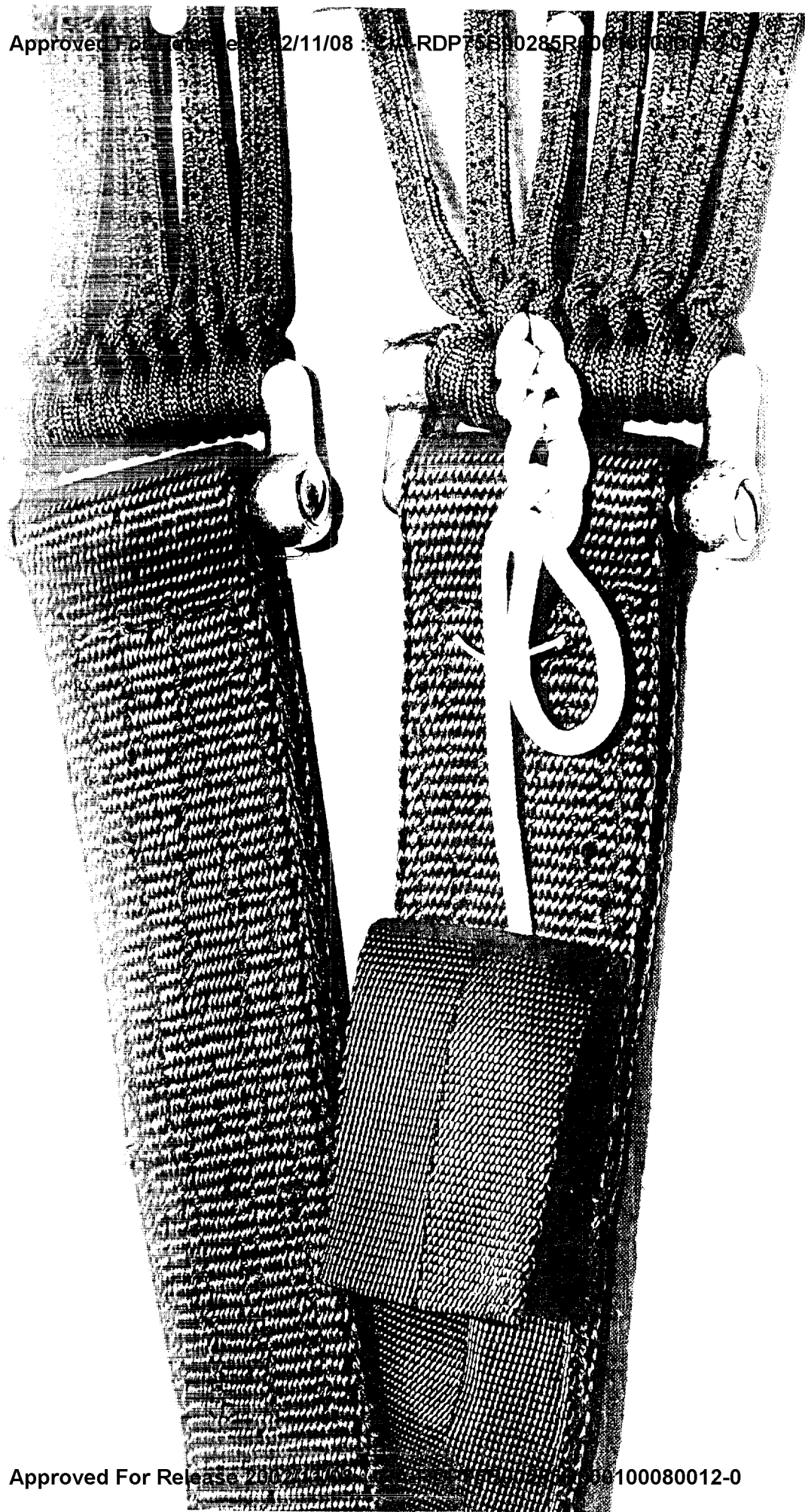
The purpose of these tests was to evaluate the feasibility of the air crewman turning (steering) the parachute during descent.

The live jumps were made from a C-130 flying at 10,000 feet altitude and 110 - 125 KIAS. The first nine jumps were with "shirt sleeve" equipment to acquaint the men with the parachutes and other SR-71 equipment and the suspension line release. The other nine jumps were made with the men wearing full pressure suits. The technique of suspension line release used was to release three of the seven lines on each of the rear risers in consecutive order after the canopy opened (Figures 1-3, 1-4 and 1-5).

To summarize the written statements of the jumpers which are duplicated in the appendix:

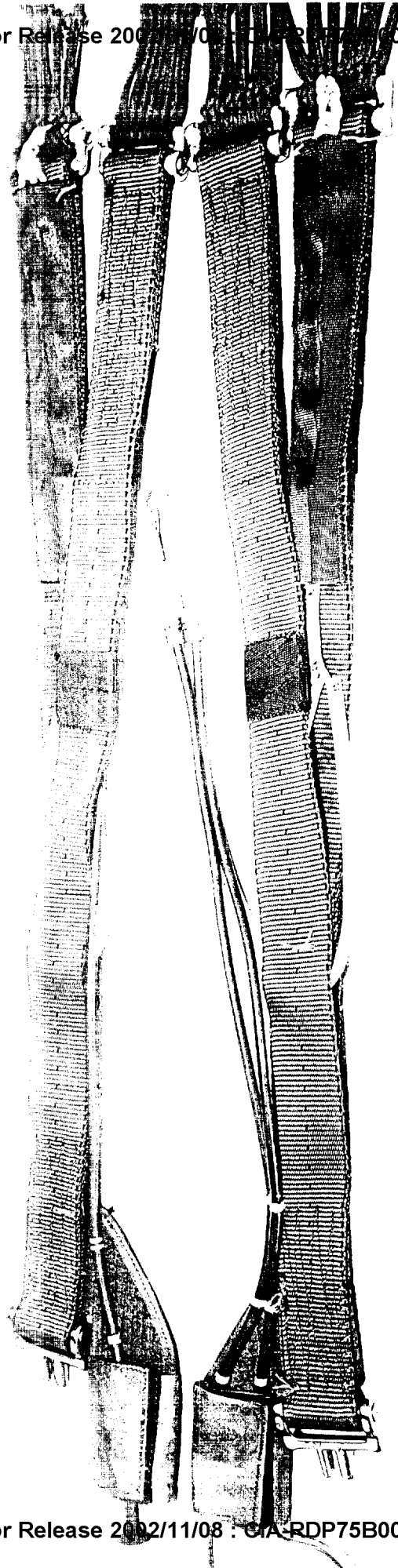
The jumpers reported that it required approximately 30 seconds to make 360° turns with the six suspension lines released. Holding down a front riser to effect the turn was exhausting effort. The descent rate was unaffected by the release of the six suspension lines, remaining approximately 20 feet per second. Also a constant turning factor was introduced after line release which demanded continuous physical effort to overcome. The down wind velocity was increased by four knots at a ground wind velocity of eight knots.

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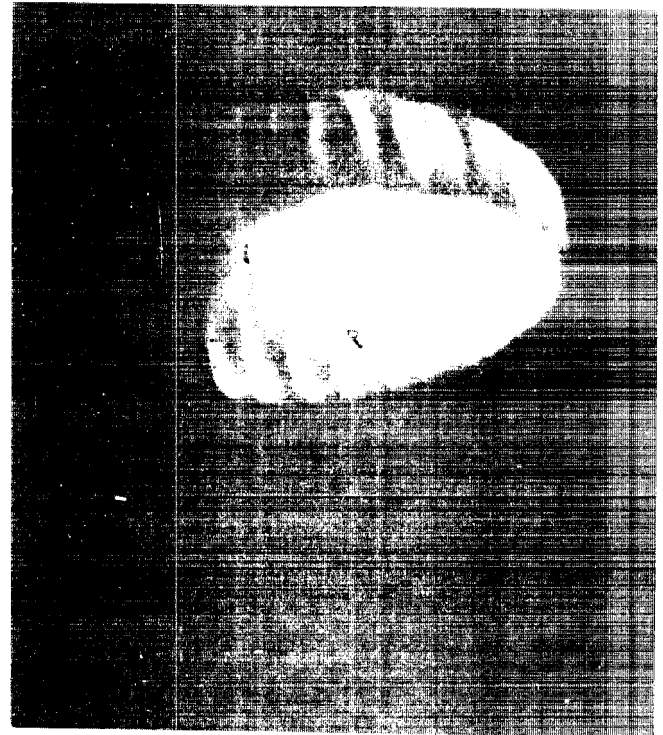
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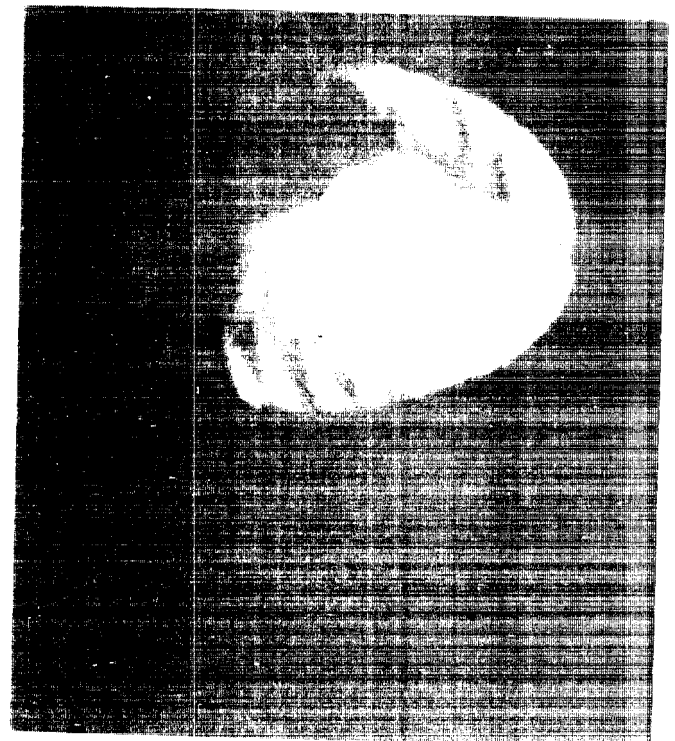


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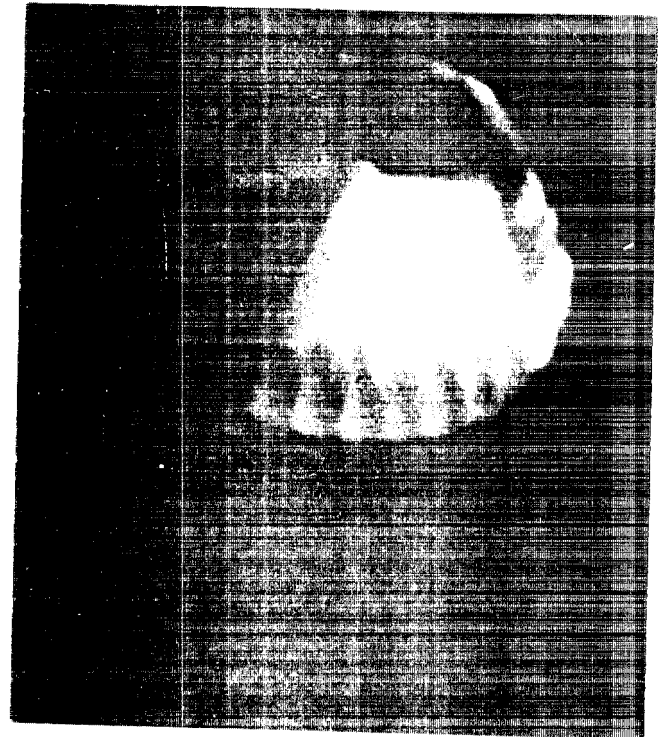
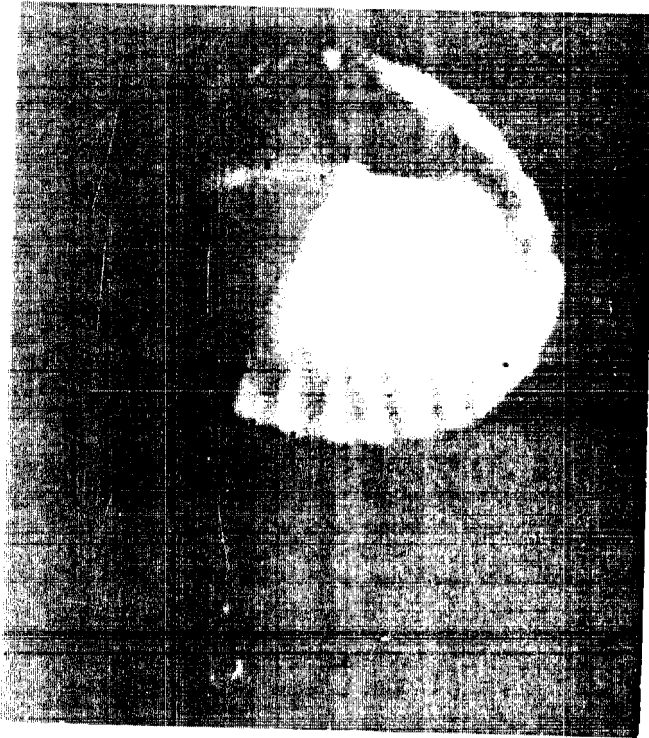
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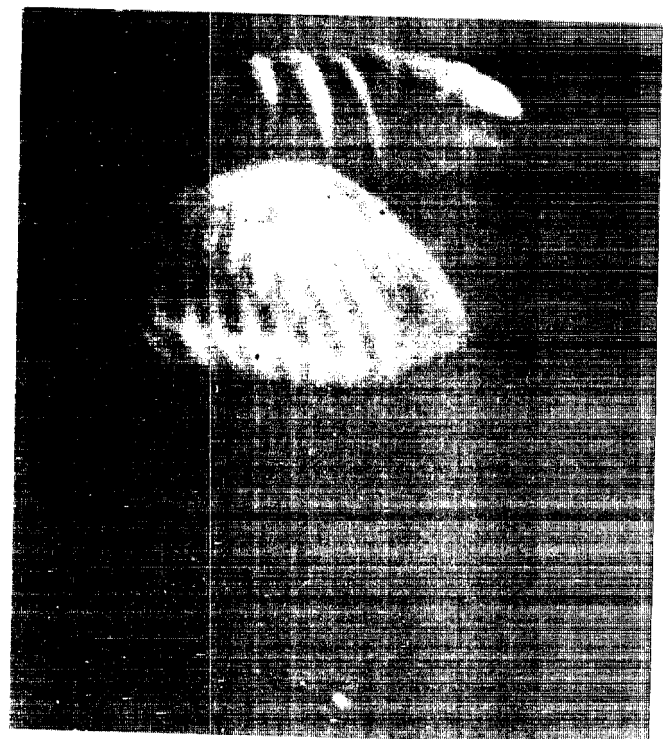
TEST JUMPER DESCENT
BEFORE AFT RISER LINES RELEASED.)



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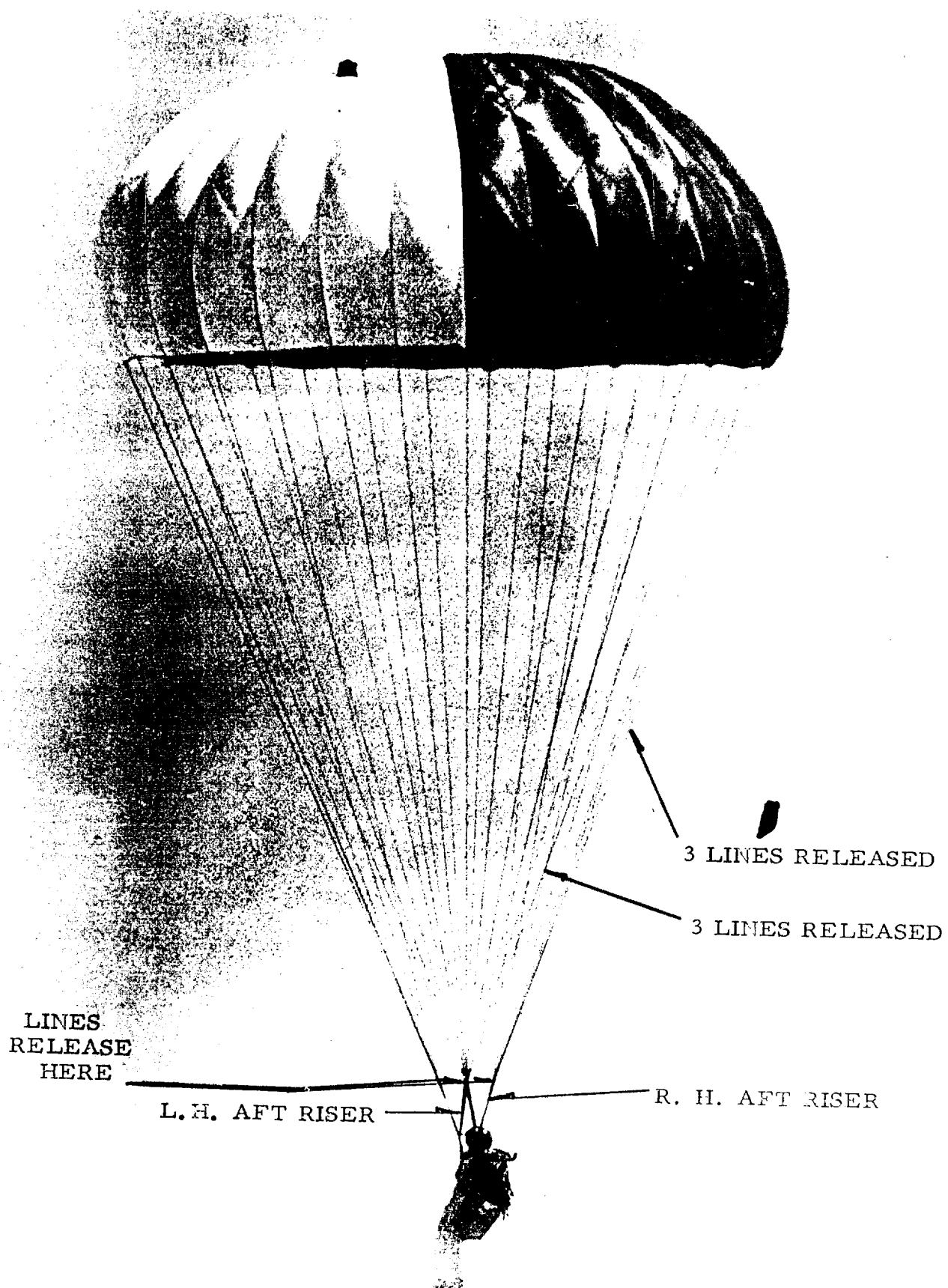


TEST JUMPER DESCENT
(6 LINES OF AFT RISER RELEASED)



TEST JUMPER DESCENT

COPIES OF AFT RISER RELEASED



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APPENDIX

Live Jump Test Reports

<u>Name</u>	<u>Date</u>
Simpkins, Jimmie C.	9 June 1971
	11 June 1971
	30 June 1971
	2 July 1971
Alexander, Guillermo M.	4 June 1971
	11 June 1971
	2 July 1971
	8 July 1971
Nye, James W.	9 June 1971
	11 June 1971
	8 July 1971
Sallee, Jettie L.	4 June 1971
	9 June 1971
	30 June 1971
	2 July 1971
Brown, Herbert R.	30 June 1971
	8 July 1971
Powers, William E. Jr.	4 June 1971

ALL RECORDS REQUIRED
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Approved For Release 2002/11/08 : CIA-RDP75B00285R00010008001201

LAST NAME - FIRST NAME - MIDDLE INITIAL SIMPKINS, JIMMIE C.		GRADE CAPTAIN SPECIAL ACCESS REQUIRED SENIOR CROWN PROGRAM		SERIAL NUMBER <div style="border: 1px solid black; width: 100px; height: 20px;"></div>	STAT
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		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

REMARKS

Project Number JON 134ADO Altitude 10,000 Delay 5 Second (uncontrolled free-fall) Speed 125 KIAS, Aircraft C-130/358. Upon exit from the aircraft the weight of the seat kit caused the jumper to have an unstable condition. Approximately 5 seconds off ramp the jumper pulled the ripcord with no problems (easy pull). Release of seat kit was accomplished with no problem. Turning of the main canopy with no lines released had negative results. Upon release of the left group of lines with a vigorous jerk the canopy seemed to gain more oscillation. Turning with the left three lines released was very slow, however, a 180° turn was accomplished in approximately 30 seconds. The right group of lines were released with a slow pull and released with very limited pressure. Turning with all six lines released was very slow. Approximately 180° in 30 seconds. The seat kits swinging movement under the jumper appeared to nullify all turns. Forward drift can be increased slightly by a front riser pulled all the way down to chest level.

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Easy Landing

SIGNATURE

JIMMIE C. SIMPKINS, CPT, USA

AEFTC

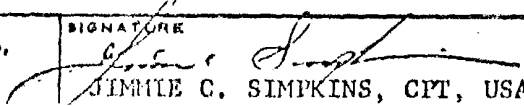
FORM MAY 55

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INDIVIDUAL JUMP REPORT

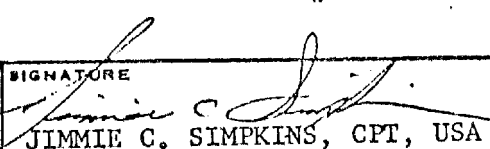
11 June 1971

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RESERVE PARACHUTE DATA USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TWIST IN LINES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____		
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		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
REMARKS Test Program JON 134ADO - C-130 Aircraft - 125 KIAS Jumper departed aircraft in regular airborne position. Delayed approximately 3-5 seconds and pulled the ripcord. No problem; easy pull. Release of the seat kit was accomplished with a straight up pull. No problems. Several attempts were made to turn the canopy with no lines released (negative results). The right three lines were released with a jerking motion. No problems. The left three lines were released with a slow easy pull. No problems. The seat kit raft was swinging to the right side of the jumper so the left front riser was pulled to chest level for approximately 1 minute. The canopy made two 360° turns to the left. Turns using rear one riser slips were much less approximately one 360° turn in 80 seconds. The seat kit raft appears to swing more in a front to rear motion vs turning to a right or left pattern. Canopy has good stability with very minor oscillations.				
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AFMTC FORM L-C-16
MAY 65

REPLACES SMITH TEST GROUP (P) FORM 15, 4 FEB 57, WHICH IS OBSOLETE.

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Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0		DATE	
LAST NAME - FIRST NAME - MIDDLE INITIAL		GRADE	
SIMPKINS, JIMMIE C.		CPT	
PARACHUTE TYPE		SERIAL NUMBER	
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RESERVE PARACHUTE DATA		TWIST IN LINES	
USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS <u>None</u>	
UNUSUAL OCCURRENCE		SEMI-INVERSION	
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		COMPLETE INVERSION	
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		SQUIDDING CANOPY	
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		INJURIES	
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
REMARKS			
<p>Project JON 134ADO - C-130 - Altitude 10,000 - Delay - 3 sec. The jumper exited the A/C (airborne position) and delayed for approximately 3 sec. The ripcord was pulled and immediate canopy inflation occurred. No problems. The jumper could check his canopy with no problems. The jumper tried to turn the canopy with no lines released and got no response. Approximately 30 seconds after exit the six lines were released with a sharp jerking movement. No problems. 360° turns were made with the left front riser pulled to shoulder level. Average turn time was 35 sec. The tabs provided for pulling the risers down were approximately 6" too high. The seat being with the jumper at this time seemed to increase oscillation. The seat kit was released at 4,000 ft. No problems. Turns attempted from this time to ground impact were approximately 90° due to the jumper being exhausted. The pressure suit is very comfortable and remained cool almost to impact. During the 360° turns the canopy seemed to turn in approximately 45° jerking movements.</p>			
<div style="text-align: center;"> <p>SPECIAL ACCESS REQUIRED SENIOR OFFICIAL PROGRAM</p> <p>FOR OFFICIAL USE ONLY</p> </div>			
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		 JIMMIE C. SIMPKINS, CPT, USA	

SP-1811

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INDIVIDUAL LIVE JUMP REPORT		DATE
JUMP NAME - FIRST NAME - MIDDLE INITIAL		12 July 1971
SIMPKINS, JIMMIE C.		STAT
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER
PARACHUTE PART NR UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY
RESERVE PARACHUTE DATA USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TWIST IN LINES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

REMARKS

Project - JON 134ADO - Altitude 10,000 ft - Speed 125 KIAS. The jumper exited the aircraft in an airborne position and delayed for 3-5 seconds. The ripcord pull was easy; however, the ripcord was hard to see from the helmet. The jumper released the 6 lines with no problems. 360° turns were accomplished by use of the left front riser. Approximate time was 30 seconds per 360°. The jumper around 6000 ft set a heading for the bull's eye on the drop zone and was able by pulling on the right front riser and then the left front to hold the heading for approximately 2000 ft. The seat kit was released at 4000 ft. No problems. Turns attempted with the canopy after seat release were minimum due to seat kit revolutions below the jumper and also the jumper's strength was exhausted. The pressure suit was comfortable. No problems were encountered in this test.

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JIMMIE C. SIMPKINS, CPT, USA

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DATE

SERIAL NUMBER

LAST NAME - FIRST NAME - MIDDLE INITIAL

GRADE

ALEXANDER, GUILLERMO M

1ST LT

PARACHUTE TYPE

☒ BACK☐ SEAT☐ CHEST☐ TROOP

MAIN CANOPY TYPE

☐ 28' STANDARD FLAT☒ 30' PERSONNEL☐ T-10

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☒ OTHER

STAT

PARACHUTE PART NR

UNUSUAL OCCURRENCE

☐ YES☒ NO

RESERVE PARACHUTE DATA

USED

☐ YES☒ NO

UNUSUAL OCCURRENCE

☐ YES☒ NO

MAIN CANOPY DATA

DAMAGE

☐ NONE☐ MEDIUM☐ LIGHT☐ HEAVY

TWIST IN LINES

☒ YES☐ NO

NR OF FULL TWISTS

1

SEMI-INVERSION

☐ YES☐ NO

COMPLETE INVERSION

☐ YES☐ NO

SQUIDDING CANOPY

☐ YES☐ NO

INJURIES

☐ YES☐ NO

REMARKS

The system fits well and is comfortable, upon exit I reached for the ripcord and deployed the canopy, the opening shock was light. Turning the canopy without the 6 line release is useless, after deploying the bit I released the 6 lines and tried to turn the canopy by pulling on the rear risers, the response was poor about 30° per minute. The front risers were much better but still poor. The forward drift was about 4 knts. The canopy did not oscillate after the 6 line release. The risers are hard to pull, you have to reach for the connector link and pull it down to your chest to get a fair turn. I was tired when I reached the ground.

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SIGNATURE

Guillermo M. Alexander

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LAST NAME • FIRST NAME • MIDDLE INITIAL ALEXANDER, GUILLEMO M.		GRADE 1st LT	DATE 11 JUN 71
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UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<div style="border: 1px solid black; padding: 5px; transform: rotate(-5deg);"> SPECIAL ACCESS SENIOR PERSONNEL FOR OFFICIAL USE ONLY STAT </div>	
RESERVE PARACHUTE DATA <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA	
USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TWIST IN LINES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____	
		SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

REMARKS

Exit the airplane at 125 kts Took APPROX 2 sec AND Pulled. After out AND OPEN I RELEASED THE BLINES AND THE SURVIVAL KIT. I CONCENTRATED ON THE FRONT RISERS SPECIALLY THE RIGHT FRONT. THE CANOPY IS SLOW TO REACT AND IT TAKES ABOUT 18-25 sec. for a 360° TURN. THE WIND WAS MAKING THE KIT ^{SUSPENDED} ^{CONTENTS - KSKI} OSCILLATED AND THE CANOPY HAD A CONSTANT ^{SLOW} TURN TO THE LEFT. OPENING SHOCK WAS LIGHT AND THE RATE OF DESCENT WAS SLOW. MAKING CONSTANT TURNS MAKES YOU TIRED FAST AND TAKES A LOT OUT OF YOU.

SPECIAL ACCESS REQUIRED
SENIOR PERSONNEL PROGRAM
FOR OFFICIAL USE ONLY

1 This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.

SIGNATURE

Guillermo M. Alexander

AFTTC

FORM
MAY 60

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

REPLACES 6811TH TEST GROUP (P) FORM 23, 4 FEB 67, WHICH IS OBSOLETE.

INDIVIDUAL LIVE JUMP REPORT		DATE
LAST NAME - FIRST NAME - MIDDLE INITIAL		2 JUL 71
GRADE		SERIAL NUMBER
ALEXANDER GUILLERMO M 1st LT		SPECIAL ACCESS REQUIRED
PARACHUTE TYPE	MAIN CANOPY TYPE	
<input checked="" type="checkbox"/> BACK <input type="checkbox"/> CHEST <input type="checkbox"/> SEAT <input type="checkbox"/> TROOP	STAT <input type="checkbox"/> 26' STANDARD FLAT <input type="checkbox"/> 24' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input checked="" type="checkbox"/> OTHER	
PARACHUTE PART NR	FOR OFFICIAL USE ONLY	
UNUSUAL OCCURRENCE	MAIN CANOPY DATA	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY	
RESERVE PARACHUTE DATA	TWIST IN LINES	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____	
UNUSUAL OCCURRENCE	COMPLETE INVERSION	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
	INJURIES	
	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

REMARKS

Left the aircraft at 10,000 feet took a 2-3 sec delay and deployed my main. I checked the canopy and then released the ^{6 lines and} survival kit. It was harder to turn with the pressure suit, but 360° turns in less than 30 sec are still possible.

It one plays with the canopy at altitude, when you get to the ground you are too tired to do very much, I think turning should be done only when you get close to the ground and you are trying to avoid something.

SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

FOR OFFICIAL USE ONLY

SIGNATURE

Guillermo Alexander

INDIVIDUAL LIVE JUMP REPORT		DATE	Page 23
LAST NAME - FIRST NAME - MIDDLE INITIAL		GRADE	SERIAL NUMBER
ALEXANDER GUILLERMO M		1ST LT	
PARACHUTE TYPE		MAIN CANOPY TYPE	
<input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		<input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> SPECIAL ACCESS REQUIRED <input checked="" type="checkbox"/> OTHER SENIOR CROWN PROGRAM	
PARACHUTE PART NR		MAIN CANOPY DATA	
UNUSUAL OCCURRENCE		DAMAGE	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY	
RESERVE PARACHUTE DATA		TWIST IN LINES	
USED		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
UNUSUAL OCCURRENCE		SEMI-INVERSION	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		COMPLETE INVERSION	
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		SQUIDDING CANOPY	
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		INJURIES	
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

REMARKS

The jump was made with a full pressure suit and no survival kit. Exit altitude was 10,000 ft. After I left the C-130 I took about 2 sec and deployed the main canopy, after checking the canopy I released the 6 lines and during descent made several 360° turns. The more turns I made the harder it was to pull the riser. The time for a 360° turn was of 30 sec. It was a lot less work to make turns without the survival kit.

SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

FOR OFFICIAL USE ONLY

SIGNATURE

Guillermo Alexander M.

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

INDIVIDUAL LIVE JUMP REPORT

DATE

SERIAL NUMBER

LAST NAME - FIRST NAME - MIDDLE INITIAL

GRADE

PARACHUTE TYPE

☒ BACK☐ SEAT☐ CHEST☐ TROOP

PARACHUTE PART NR

UNUSUAL OCCURRENCE

☐ YES☒ NO

RESERVE PARACHUTE DATA

USED

☐ YES☐ NO

UNUSUAL OCCURRENCE

☐ YES☒ NO

MAIN CANOPY TYPE

☐ 28' STANDARD FLAT☐ 30' PERSONNEL☐ 24' STANDARD FLAT☐ OTHER

STAT

☒ T-10

FOR OFFICIAL USE ONLY

MAIN CANOPY DATA

DAMAGE

☐ NONE☐ MEDIUM☐ LIGHT☐ HEAVY

TWIST IN LINES

☐ YES☐ NO

NR OF FULL TWISTS

SEMI-INVERSION

☐ YES☒ NO

COMPLETE INVERSION

☐ YES☒ NO

SQUIDDING CANOPY

☐ YES☒ NO

INJURIES

☐ YES☒ NO

REMARKS

ON ALL RISE TURNS, PULLED CONNECTOR LINKS TO CHIN LEVEL.

1. NO RELEASE LINES, NO KIT RELEASE. TRIPED PULLING ^{FT FRONT} RISER 30 SEC, NO TURNING.2. KIT RELEASED; NO LINES RELEASED, PULLED FT FRONT RISER, 360° TURN IN ^{ARC} 60 SEC. BELIEVED
KART RATED AS SAIL TO HELP TURN

3. KIT RELEASED, 3 LINE RELEASE. EFFECT SAME AS (2)

4. KIT RELEASED, 6 LINE RELEASE. PULLING BACK RISERS HAD LITTLE EFFECT.
PULLING FRONT RISER PRODUCED 360° TURN IN APPROX 25 SEC. SAME
EFFECT BOTH DIRECTIONS. CANOPY HELD LEADING WELL.
EXTREMELY TIRING PULLING RISERS. RECOMMEND PILOT TO
WAIT UNTIL 200-300 FT. ABOVE GROUND. BEFORE USING.

SPECIAL SENIOR GROUND PROGRAM

FOR OFFICIAL USE ONLY

1 This space to be used to explain all unusual occurrences, injuries,
etc. NEGATIVE REPORT IS REQUIRED.

SIGNATURE

James Nye

AFMTC

FORM
MAY 56

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

L-0-16

REPLACES 6811TH TEST GROUP (P) FORM 23, 4 FEB 57, WHICH IS OBSOLETE.

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

LAST NAME - FIRST NAME - MIDDLE INITIAL <i>Nyc James W</i>		GRADE <i>Capt</i>	DATE <i>11 June 71</i>
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 26' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> 24' STANDARD FLAT <input type="checkbox"/> OTHER	
PARACHUTE PART NR UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input type="checkbox"/> NO		STAT <input checked="" type="checkbox"/> T-10 FOR OFFICIAL USE ONLY	
RESERVE PARACHUTE DATA USED <input type="checkbox"/> YES <input type="checkbox"/> NO		MAIN CANOPY DATA DAMAGE <input type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input type="checkbox"/> NO		TWIST IN LINES <input type="checkbox"/> YES <input type="checkbox"/> NO NR OF FULL TWISTS _____	
		COMPLETE INVERSION <input type="checkbox"/> YES <input type="checkbox"/> NO	
		INJURIES <input type="checkbox"/> YES <input type="checkbox"/> NO	

REMARKS:
CONNECTOR LINKS PULLED TO CHAIN LEVEL TO INITIATE TURNS ONLY effective turns were accomplished using front risers. UNSTABLE ON OPENING. Some damage to couple of panels. Canopy very stable. Little oscillation, both before and after 6 hangers loose. Canopy has very little tendency to turn without pulling on risers. It required about 20 sec to make a 360° Turn by pulling on a front riser. I used the rite front for most of the turns. Making a lot of turns is extremely tiring. Would recommend a pilot to wait until he is 200-300 ft before making turns. Also pilot should free in wind on landing. ~~Let handling but acts no much~~
Received bruises, on both jumps, under left arm near arm pit.

SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

FOR OFFICIAL USE ONLY

This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.

SIGNATURE

James W Nyc

AFPTC

FORM
MAY 69

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

INDIVIDUAL LIVE JUMP REPORT		DATE
ST NAME - FIRST NAME - MIDDLE INITIAL <i>NIE JAMES W</i>		<i>8 July 71</i>
GRADE <i>CAPT</i>		SERIAL NUMBER
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 25' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER
PARACHUTE PART NR		STAT
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY TWIST IN LINES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____
RESERVE PARACHUTE DATA		
USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO COMPLETE INVERSION <input type="checkbox"/> YES <input type="checkbox"/> NO
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
REMARKS <i>Full Pressure Suit No. SCAT KIT.</i> All turns were accomplished by pulling one of the front risers connector links down to chin level. Turns could be accomplished in 25 seconds (360°), There is more pressure on the risers of this canopy than a C-9. As a result it is more tiring making turns. The canopy holds xxxxx does not have a tendency to turn unless the front risers are pulled. That is it holds a heading well. The pressure suit did not present a problem. It was a little more difficult to see because of the helmet, but the canopy can easily be checked by pushing back against the risers.		
1 This space is for use by the reporting unit only. If a negative report is required, it should be indicated in the remarks section.		SIGNATURE <i>James Nye</i>

FOR OFFICIAL USE ONLY

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

LAST NAME • FIRST NAME • MIDDLE INITIAL <i>Sallee, Jettie L</i>		GRADE SENIOR CROWN PROGRAM	SERIAL NUMBER
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		STAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 	

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

LAST NAME - FIRST NAME - MIDDLE INITIAL <i>Saunders, Jettie L.</i>		GRADE <i>S.S.</i>	DATE <i>11/11/55</i>	SERIAL NUMBER
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> 24' STANDARD FLAT <input type="checkbox"/> OTHER		
PARACHUTE PART NR		STAT		
UNUSUAL OCCURRENCE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		RESERVE PARACHUTE DATA		
USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY		
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TWIST IN LINES <input type="checkbox"/> YES <input type="checkbox"/> NO NR OF FULL TWISTS <i>9</i>		
		SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
		COMPLETE INVERSION <input type="checkbox"/> YES <input type="checkbox"/> NO		
		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
		INJURIES <input type="checkbox"/> YES <input type="checkbox"/> NO		
REMARKS <i>Ramp Exit C-130 - 110 Knots - 10,000 ft</i> <i>Normal opening shock. Released pit and attempted turn. Very little turning ability was observed. Released 3 lines using a real slow steady pull. Release worked ok. Turning was real slow. Released the remaining 3 lines using the same procedure. Release worked ok.</i> <i>Turning is exhausting. Using the front riser a 360° turn can be accomplished in approx. 25-30 sec. Rear risers have very little turning ability. Forward Drift is approx. 3-4 Knots. Landing was normal.</i>				
SPECIAL ACCESS REQUIRED SENIOR CROWN PROGRAM				
FOR OFFICIAL USE ONLY				
1 This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.		SIGNATURE <i>J. T. Saunders</i>		

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

INDIVIDUAL LIFE SUPPORT REPORT

SPECIAL ACCESS REQUIRED

DATE

30 June 71

LAST NAME - FIRST NAME - MIDDLE INITIAL

SENIOR

GRADE PROGRAM

SERIAL NUMBER

PARACHUTE TYPE

☒ BACK☐ SEAT☐ CHEST☐ TROOP

MAIN CANOPY TYPE

☐ 28' STANDARD FLAT☐ 30' PERSONNEL☐ 24' STANDARD FLAT☒ OTHER

STAT

☐ T-10

PARACHUTE PART NR

UNUSUAL OCCURRENCE

☐ YES☒ NO

RESERVE PARACHUTE DATA

USED

☐ YES☒ NO

UNUSUAL OCCURRENCE

☐ YES☒ NO

MAIN CANOPY DATA

DAMAGE

☐ NONE☐ MEDIUM☒ LIGHT☐ HEAVY

SEMI-INVERSION

☐ YES☒ NO

SQUIDDING CANOPY

☐ YES☒ NO

TWIST IN LINES

☒ YES☐ NO

NR OF FULL TWISTS 2

COMPLETE INVERSION

☐ YES☒ NO

INJURIES

☐ YES☒ NO

REMARKS

Romp Exit C-130, 125 knots, 10,000 ft.

Normal opening. Small Tear in rear of Canopy. Released 6 lines. Pulling Right Front riser ^{connector} down to eye level and Holding produced a 360° Turn in approx. 25 sec. Pulling Left riser connector down to eye level produced a 360° Turn in approx 30 sec. On one Turn To the left, The Turn came in steps of approx. 30°. This was only noticed on one Turn. The canopy was constantly Trying To turn Left. Released Seat Kit at 4000 ft. Turning Ability is Decreased with Kit released.

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(Cover)

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AFFTC

FORM
MAY 66

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REPLACES 651TH TEST GROUP (P) FORM 23, 4 FEB 67, WHICH IS OBSOLETE.

If Kit + Roft are swinging in a
clockwise Direction it makes a Left Turn
extremely Difficult. With The Kit and Roft
Swinging Counter-Clockwise a Left Turn can
be made in approx. 30 sec.

Landing with pressure suit is slightly
harder than with no pressure suit. Landing
is still Comfortable.

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SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

SP-1811

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INDIVIDUAL LIVE JUMP REPORT		SPECIAL ACCESS REQUIRED FOR OFFICIAL USE ONLY		DATE 2 July 71
LAST NAME - FIRST NAME - MIDDLE INITIAL Jallee, Jettie L		GRADE SSgt		SERIAL NUMBER
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER		STAT
PARACHUTE PART NR		MAIN CANOPY DATA		
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY		
RESERVE PARACHUTE DATA		TWIST IN LINES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS		
USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
REMARKS				

Ramp Exit C-130 - 125 Knots - 10,000ft.

Stepped off ramp and went unstable. Opening Shock was extremely light.

Made a 6 line Release and Timed Several 360° Turns. The 360° Turns were completed in approx. 30 sec. ea. (L+R.) The fastest ^(360°) turn was to the left which was completed in just under 25 sec.

AT 4000 ft. I attempted to release my kit. The kit released on the left side only. I pushed on the kit twice to get it to release. When the kit released it dropped free and fell to the ground with the raft inflated.

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SIGNATURE
Jettie L Jallee

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Oscillations seemed to be larger without
the kit below.

Turning ^{ONLY} ~~was~~ quicker with no kit.

I had a small oscillation on landing

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DATE 20 July 1971

LAST NAME - FIRST NAME - MIDDLE INITIAL Brown, Herbert R.		GRADE 1st Lt	SERIAL NUMBER [REDACTED]	STAT
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 26' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER (SR-71) SENIOR CROWN PROGRAM FOR OFFICIAL USE ONLY		
PARACHUTE PART NR UNUSUAL OCCURRENCE <input checked="" type="checkbox"/> YES Survival kit did not deploy <input type="checkbox"/> NO RESERVE PARACHUTE DATA USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO TWIST IN LINES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____ COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		

REMARKS

I exited the aircraft in an airborne position. The ripcord was pulled approximately 3 seconds after exit. The parachute opening shock was mild. The 6 suspension lines were released approximately 20 seconds after exit. I was able to turn the canopy through 360 degrees in approximately 35 seconds. To continually work the canopy requires a great deal of physical effort on the jumper's part. The survival kit actuation handle was pulled at approximately 4,000 ft altitude. The left side of the kit released but the right hand side remained attached. From 4,000 to 1,000 ft I attempted to jar the kit loose. At approximately 1,000 ft, I released the kit attaching hardware from the parachute harness and held the kit in my hand. At approximately 10 to 20 ft above ground I attempted to toss the kit away from me. I did not toss the kit far enough and was forced to land on it in a sitting position. I received no injuries as a result of the jump or landing.

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SIGNATURE

Herbert R. Brown

SP-1811

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INDIVIDUAL LIVE JUMP REPORT		ACCESS REQUIRED SENIOR CROWN PROGRAM		DATE	8 July 1971
		FOR OFFICIAL USE ONLY		SERIAL NUMBER	STAT
ST NAME - FIRST NAME - MIDDLE INITIAL		GRADE			
BROWN, HERBERT R.		1st Lt			
PARACHUTE TYPE		MAIN CANOPY TYPE			
<input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		<input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER SR-71			
PARACHUTE PART NR		MAIN CANOPY DATA			
UNUSUAL OCCURRENCE		DAMAGE		TWIST IN LINES	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____	
RESERVE PARACHUTE DATA		SEMI-INVERSION		COMPLETE INVERSION	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
UNUSUAL OCCURRENCE		SQUIDDING CANOPY		INJURIES	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

REMARKS

I exited the C-130 aircraft from the ramp in a stable position. The suspension lines were released just after the canopy achieved a stable full open condition. Several 360 degree turns were accomplished with a time duration varying from 20 to 35 seconds. I found the canopy easier to turn during this test (without survival kit) than during a previous test with an undeployed survival kit.

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Herbert R. Brown

25X1A

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DATE

SERIAL NUMBER

SPECIAL ACC

SENIOR GROUP

STAT

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MAIN CANOPY TYPE

20' STANDARD FLAT

30' PERSONNEL

24' STANDARD FLAT

T-10

UNUSUAL OCCURRENCE

YES

NO

RESERVE PARACHUTE DATA

USED

YES

NO

UNUSUAL OCCURRENCE

YES

NO

DAMAGE

NONE

LIGHT

MEDIUM

HEAVY

SEMI-INVERSION

YES

NO

SQUIDDING CANOPY

YES

NO

COMPLETE INVERSION

YES

NO

INJURIES

YES

NO

REMARKS

C-130 - 110 KTS - Ramp exit 10,000 FT.

I stopped off the ramp backwards facing line of flight and fell stable for approx 3 sec. Then I pulled the ripcord with my right hand and the parachute deployed and opened without any noticeable opening shock.

AFTER full opening I tried to turn the canopy by pulling down the right front riser. This caused slight oscillation and no canopy turn. Then I released the SIK line to turn by pulling down on both risers simultaneously. Then I released the seat kit by pulling the handle on the right side. As the kit fell away the handle stayed attached to it. So I raised the kit.

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SIGNATURE

SENIOR GROUP

PROGRAM

up to the front of the canopy.

Worked the handle free, then I clipped the kit

And it fell to the end of the retention line.

I then tried to turn the canopy by pulling on the right rear riser. After holding, the riser down to where the connector link was even with my fore head for 30 sec I had made ~~it~~ about a 10° turn. By this time my arms were tired and I released the riser, the canopy turned back to its original heading. After resting for a few seconds I tried turning by pulling on the front risers. By pulling the ^{right} front riser it took 15-18 sec for a 180° turn. Using the left front riser was about 3-5 sec faster.

Decent and landing were normal.

I don't feel any ~~benefit~~ benefit can be derived by using the rear risers for therapy. Even using the front risers a man would be extremely tired trying to make a complete canopy turn.

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REFERENCES

SP-1650 Report, "SR-71 Personnel Parachute Descent Control"

T.O. 14D1-2-81, "Four Line Release"

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DEPARTMENT OF THE AIR FORCE

DETACHMENT 51 HQ SMAMA (AFLC)

NORTON AIR FORCE BASE, CALIFORNIA 92409

REPLY TO
ATTN OF

ME

FEB 8 1972

SUBJECT

Modified MC-1 Personnel Parachute

SAC(LGMR/Major J. Janis)

1. On 18 December 1969, an incident occurred during a test flight of an SR-71 aircraft which resulted in crew bail-out. The parachute descent ended in a near mishap to crew members on landing as indicated in the accident board investigation:

a. "There was considerable oscillation after release of the seat kit...The landing was in a marginal area, in a rock pile, and I hit backwards and was immediately knocked back over onto my head and the chute fell over a cliff. My concern was that it was going to billow and drag me over the cliff and it appeared to be 150-200 feet down; however, the chute did not blossom..."

b. "In the drogue chute, I was trying to keep my seat oriented toward the Pilot...Once I got the chute, it was very difficult to turn the chute to look at him. I could pull down the riser and rotate the chute to where I was looking at him; however, as soon as I would let go it would rotate back and I would be facing primarily in a southern direction... I hit approximately six feet from a ravine. My chute canopy went over the bank of the ravine. The chute collapsed immediately before I could activate the quick releases...had the canopy remained open and had there been any surface wind, I'm sure it would have pulled me into the ravine. The ravine was approximately 40 to 50 feet deep with fairly steep sides".

2. Because of the problems incurred, the Accident Investigation Board recommended that a four-line release be incorporated into the SR-71 personnel parachute to enhance control of these chutes and reduce oscillations.

3. ADP was requested to accomplish an Engineering Study and they recommended a six-line release rather than a four-line release modification to the MC-1 parachute, because of its larger size.

4. The parachute tests were performed at the Naval Test Center, El Centro, California. They included whirl tower tests at 175, 225, and 250 knots in addition to nine live jumps in "shirt-sleeve" environment and nine live jumps in full pressure suits.

5. The Jump Tests revealed:

a. The modified MC-1 parachute is very stable.

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b. The six-line release provided a slight turning improvement but actuation was difficult and tiring. Turns of 360° required 25-40 seconds to complete. Line release also induced a three to four knot forward speed; the desirability of this feature would vary with jump conditions, such as a 10 to 15 knot wind.

c. Turns with the seat kit and raft released were more difficult to accomplish. The suspended survival kits made damping of crewmember oscillation more difficult.

d. Pressure suits did not present a problem in descent activity.

7. The test results have indicated that there is some merit to the six-line release modification. There is considerable doubt, however, that the parachute control exercised by test personnel would be utilized by crewmembers in an emergency situation. Test jumps were made with much preparation and full awareness of descent conditions, factors not usually available to crewmembers. Test personnel accomplished a variety of control maneuvers not expected of crewmembers.

8. ASPO engineering feels that the presently designed chute provides the optimum chances for survival under all circumstances and does not feel the proposed modifications to resolve speculation on possible adverse conditions will enhance the effectiveness of the existing system. We concur with the analysis and advice of the El Centro Parachute Test Center personnel and recommend that the modification not be accomplished.

FOR THE COMMANDER

William Marscher
WILLIAM MARSCHER, Lt Col, USAF
Chief, Service Engineering Branch
Maintenance Engineering Division

Copies to:
9SRW/9DCOS
SMAMA DET 51/FT
IG/DSOFB/Lt Col Marsh
SC-2

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